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3800XT March

AMD Ryzen 7 3800XT 8-Core testing with a MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 (1.MS BIOS) and Sapphire AMD Radeon HD 4650 on Debian 10 via the Phoronix Test Suite.

Automated Executive Summary

2 had the most wins, coming in first place for 57% of the tests.

Based on the geometric mean of all complete results, the fastest (1) was 1.008x the speed of the slowest (3). 2 was 0.993x the speed of 1 and 3 was 1x the speed of 2.

Test Systems:

1

2

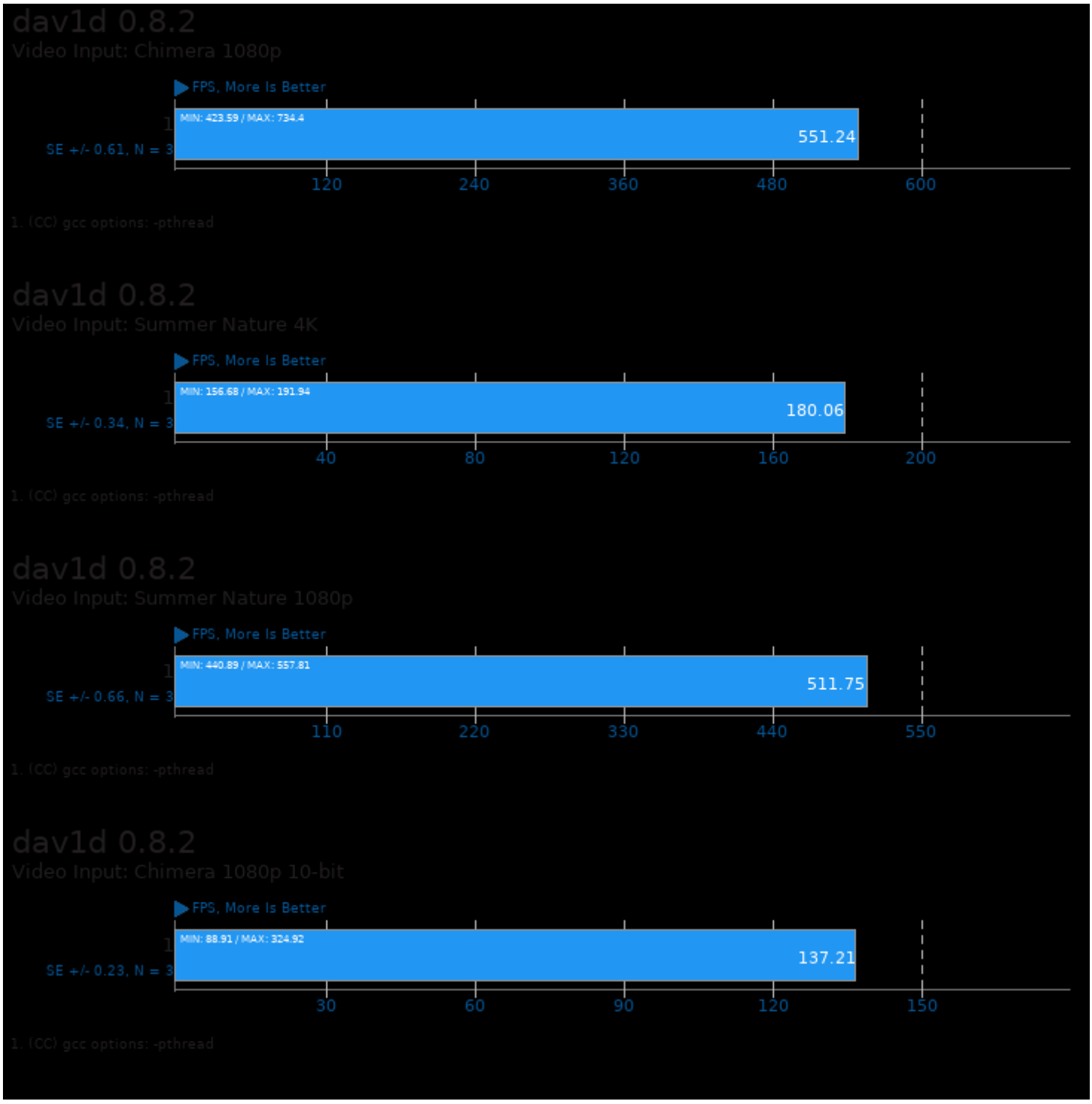
3

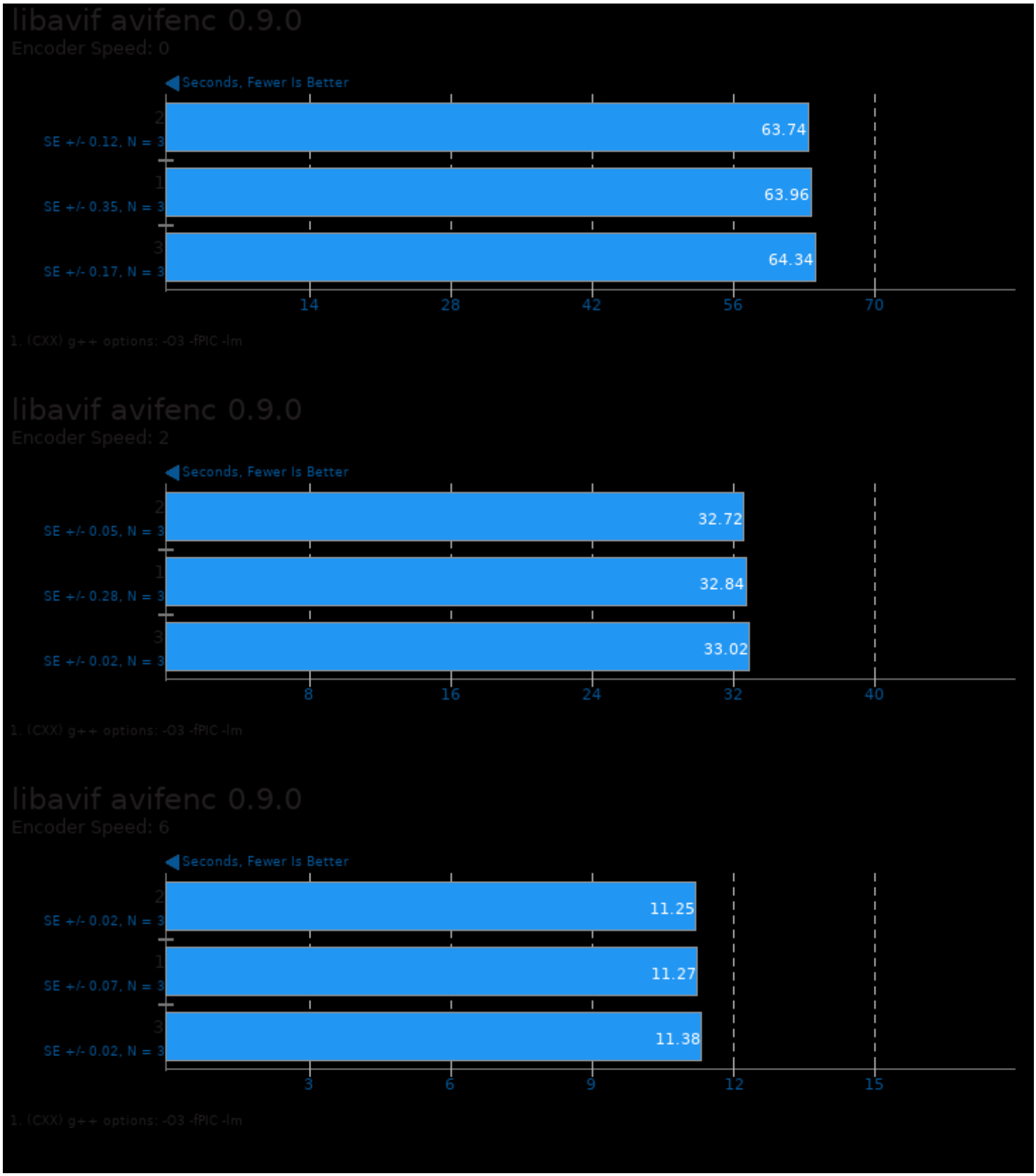
Processor: AMD Ryzen 7 3800XT 8-Core @ 3.90GHz (8 Cores / 16 Threads), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 (1.MS BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 128GB INTEL SSDPEKKW128G7, Graphics: Sapphire AMD Radeon HD 4650, Audio: AMD RV710/730, Network: Intel I211

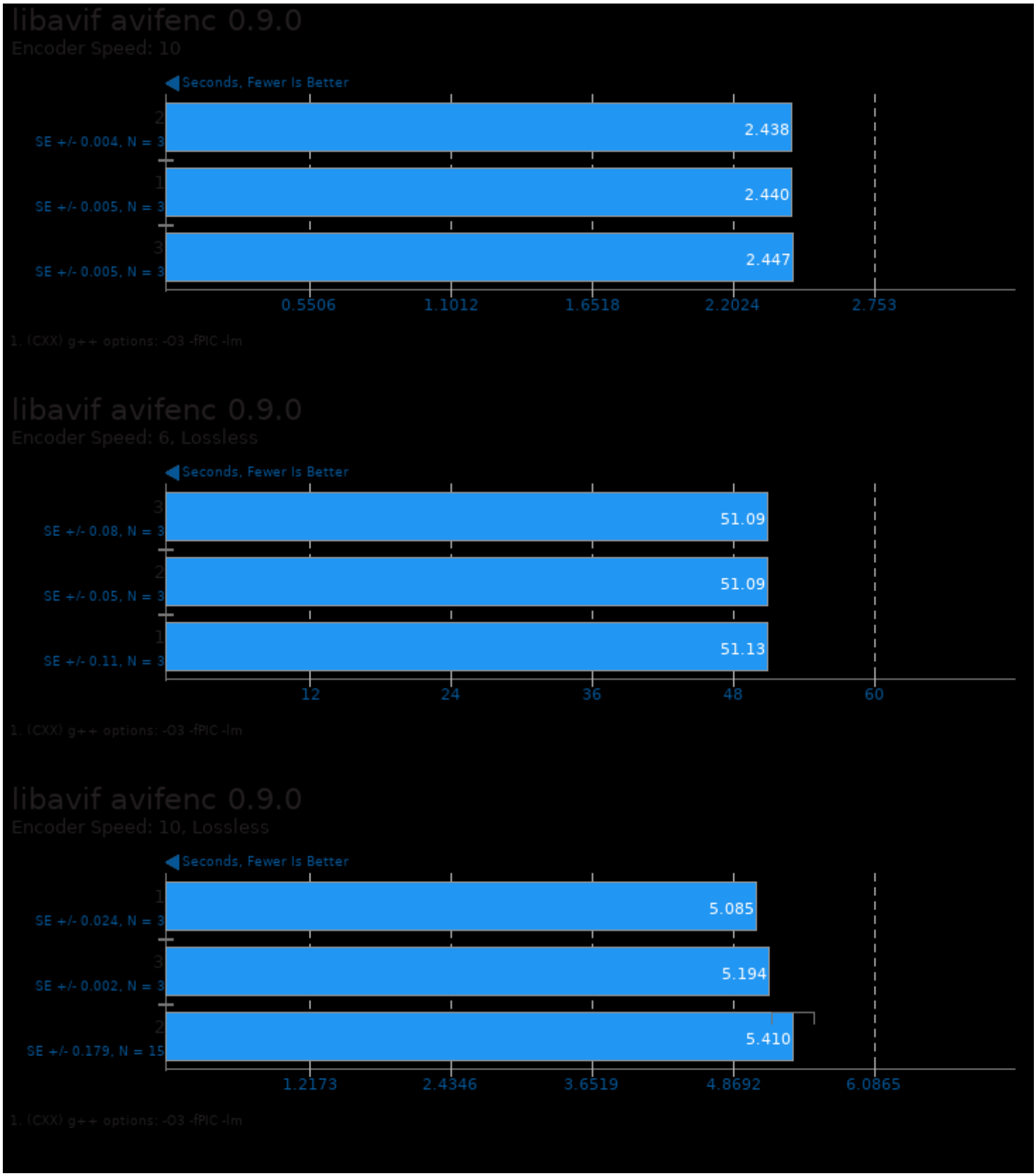
OS: Debian 10, Kernel: 4.19.0-14-amd64 (x86_64), Display Server: X Server 1.20.4, Display Driver: modesetting 1.20.4, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

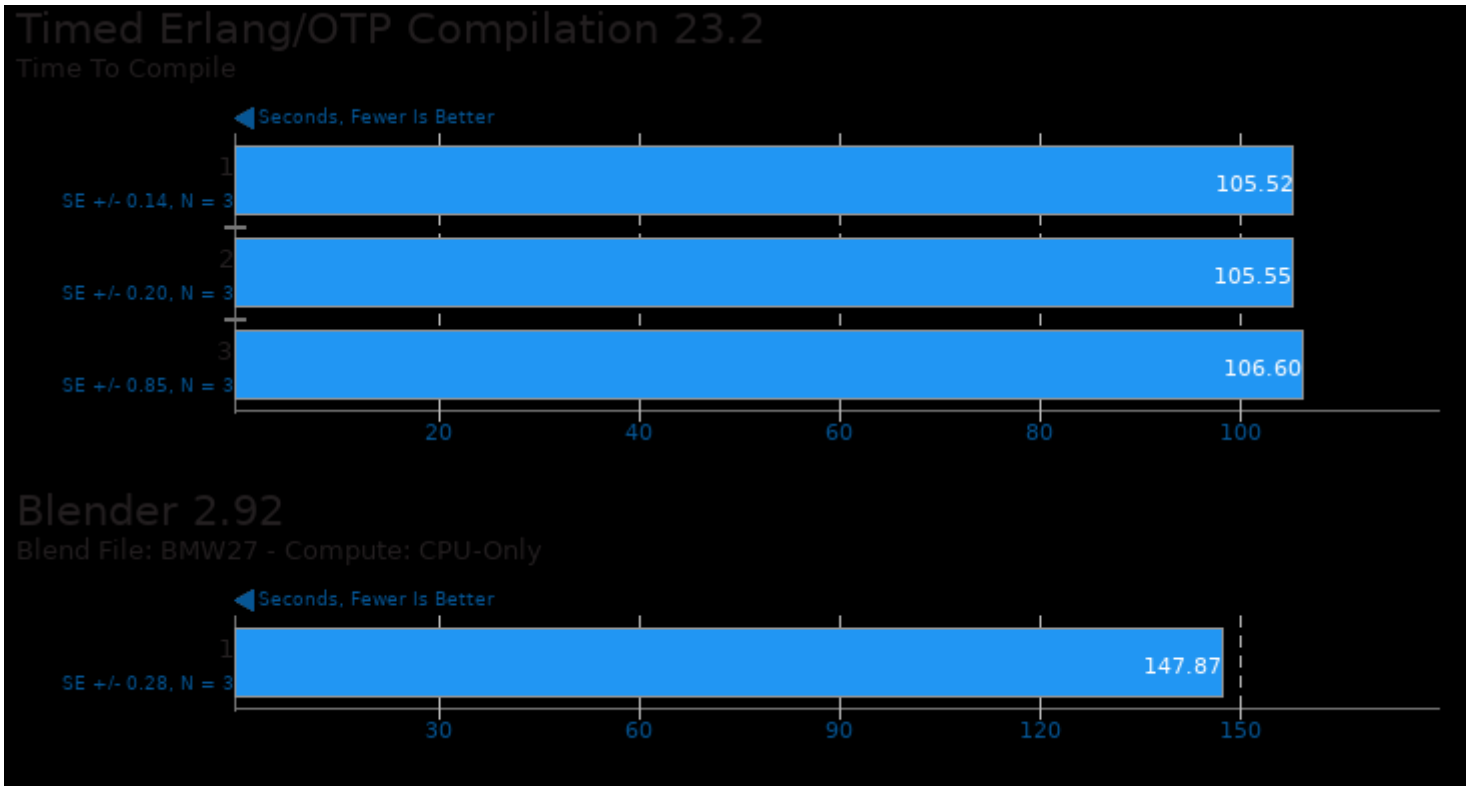
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8701021
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3
dav1d - Chimera 1080p (FPS)	551.24		
Standard Deviation	0.2%		
dav1d - Summer Nature 4K (FPS)	180.06		
Standard Deviation	0.3%		
dav1d - S.N.1 (FPS)	511.75		
Standard Deviation	0.2%		
dav1d - C.1.1.b (FPS)	137.21		
Standard Deviation	0.3%		
libavif avifenc - 0 (sec)	63.964	**63.736**	**64.337**
Normalized	99.64%	100%	99.07%
Standard Deviation	1%	0.3%	0.5%
libavif avifenc - 2 (sec)	32.842	**32.719**	**33.020**
Normalized	99.63%	100%	99.09%
Standard Deviation	1.5%	0.3%	0.1%
libavif avifenc - 6 (sec)	11.272	**11.246**	**11.382**
Normalized	99.77%	100%	98.81%
Standard Deviation	1%	0.3%	0.3%
libavif avifenc - 10 (sec)	2.440	**2.438**	**2.447**
Normalized	99.92%	100%	99.63%
Standard Deviation	0.4%	0.3%	0.4%
libavif avifenc - 6, Lossless (sec)	**51.128**	51.088	**51.086**
Normalized	99.92%	100%	100%
Standard Deviation	0.4%	0.2%	0.3%
libavif avifenc - 10, Lossless (sec)	**5.085**	**5.410**	5.194
Normalized	100%	93.99%	97.9%
Standard Deviation	0.8%	12.8%	0.1%
Timed Erlang/OTP Compilation - Time To Compile (sec)	**105.518**	105.549	**106.595**
Normalized	100%	99.97%	98.99%
Standard Deviation	0.2%	0.3%	1.4%
Blender - BMW27 - CPU-Only (sec)	147.87		
Standard Deviation	0.3%		

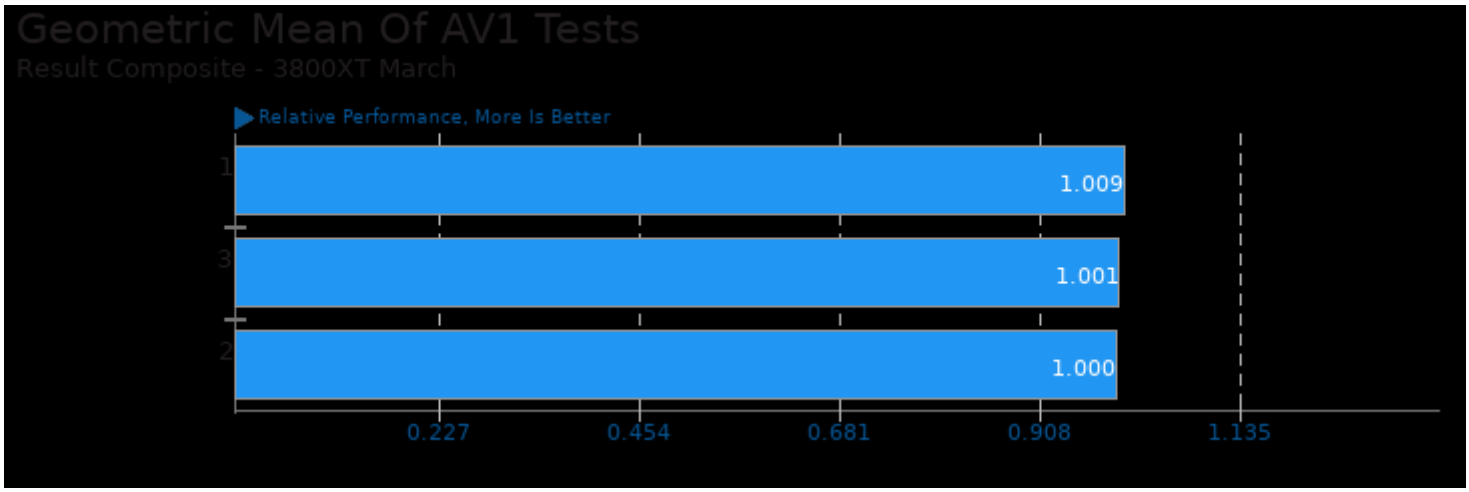

dav1d 0.8.2
Video Input: Chimera 1080p
FPS, More Is Better
MIN: 423.59 / MAX: 734.4
551.24
SE +/- 0.61, N = 3
120
240
360
480
600
1. (CC) gcc options: -pthread
dav1d 0.8.2
Video Input: Summer Nature 4K
FPS, More Is Better
MIN: 156.68 / MAX: 191.94
180.06
SE +/- 0.34, N = 3
40
80
120
160
200
1. (CC) gcc options: -pthread
dav1d 0.8.2
Video Input: Summer Nature 1080p
FPS, More Is Better
MIN: 440.89 / MAX: 557.81
511.75
SE +/- 0.66, N = 3
110
220
330
440
550
1. (CC) gcc options: -pthread
dav1d 0.8.2
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
MIN: 88.91 / MAX: 324.92
137.21
SE +/- 0.23, N = 3
30
60
90
120
150
1. (CC) gcc options: -pthread


libavif avifenc 0.9.0
Encoder Speed: 0
Seconds, Fewer Is Better
2
SE +/- 0.12, N = 3
63.74
1
SE +/- 0.35, N = 3
63.96
3
SE +/- 0.17, N = 3
64.34
14
28
42
56
70
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 2
Seconds, Fewer Is Better
2
SE +/- 0.05, N = 3
32.72
1
SE +/- 0.28, N = 3
32.84
3
SE +/- 0.02, N = 3
33.02
8
16
24
32
40
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 6
Seconds, Fewer Is Better
2
SE +/- 0.02, N = 3
11.25
1
SE +/- 0.07, N = 3
11.27
3
SE +/- 0.02, N = 3
11.38
3
6
9
12
15
1. (CXX) g++ options: -O3 -fPIC -lm


libavif avifenc 0.9.0
Encoder Speed: 10
Seconds, Fewer Is Better
2
SE +/- 0.004, N = 3
2.438
1
SE +/- 0.005, N = 3
2.440
3
SE +/- 0.005, N = 3
2.447
0.5506
1.1012
1.6518
2.2024
2.753
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 6, Lossless
Seconds, Fewer Is Better
3
SE +/- 0.08, N = 3
51.09
2
SE +/- 0.05, N = 3
51.09
1
SE +/- 0.11, N = 3
51.13
12
24
36
48
60
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 10, Lossless
Seconds, Fewer Is Better
1
SE +/- 0.024, N = 3
5.085
3
SE +/- 0.002, N = 3
5.194
2
SE +/- 0.179, N = 15
5.410
1.2173
2.4346
3.6519
4.8692
6.0865
1. (CXX) g++ options: -O3 -fPIC -lm


Timed Erlang/OTP Compilation 23.2
Time To Compile
Seconds, Fewer Is Better
1
SE +/- 0.14, N = 3
105.52
2
SE +/- 0.20, N = 3
105.55
3
SE +/- 0.85, N = 3
106.60
20
40
60
80
100
Blender 2.92
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
1
SE +/- 0.28, N = 3
147.87
30
60
90
120
150

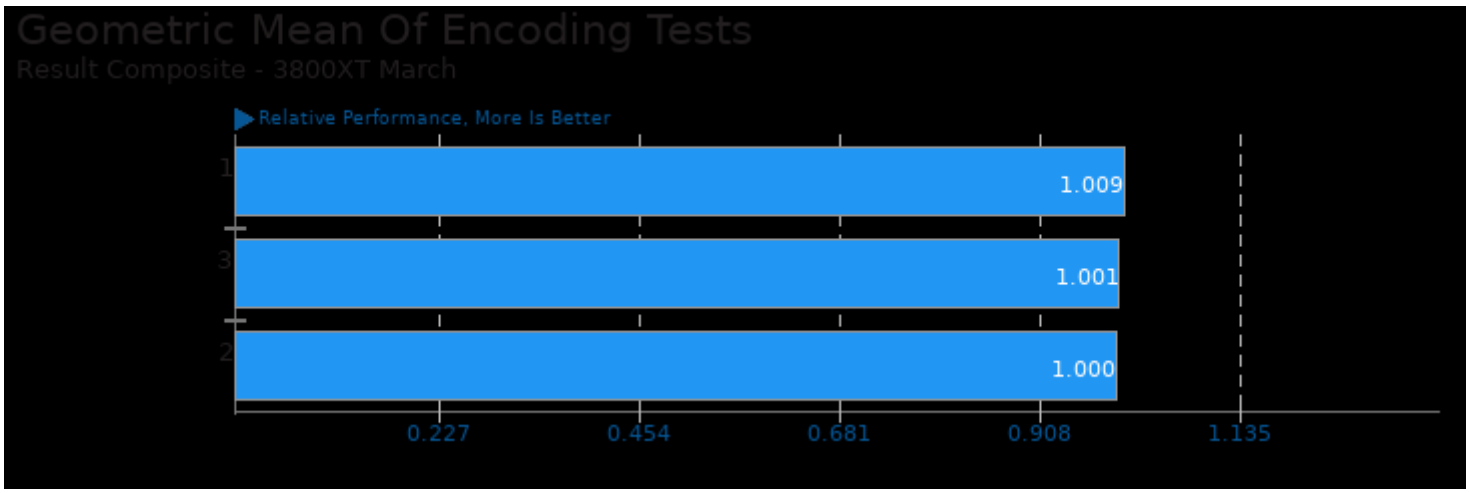
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/dav1d and pts/avifenc



Geometric mean based upon tests: pts/blender, pts/dav1d and pts/avifenc

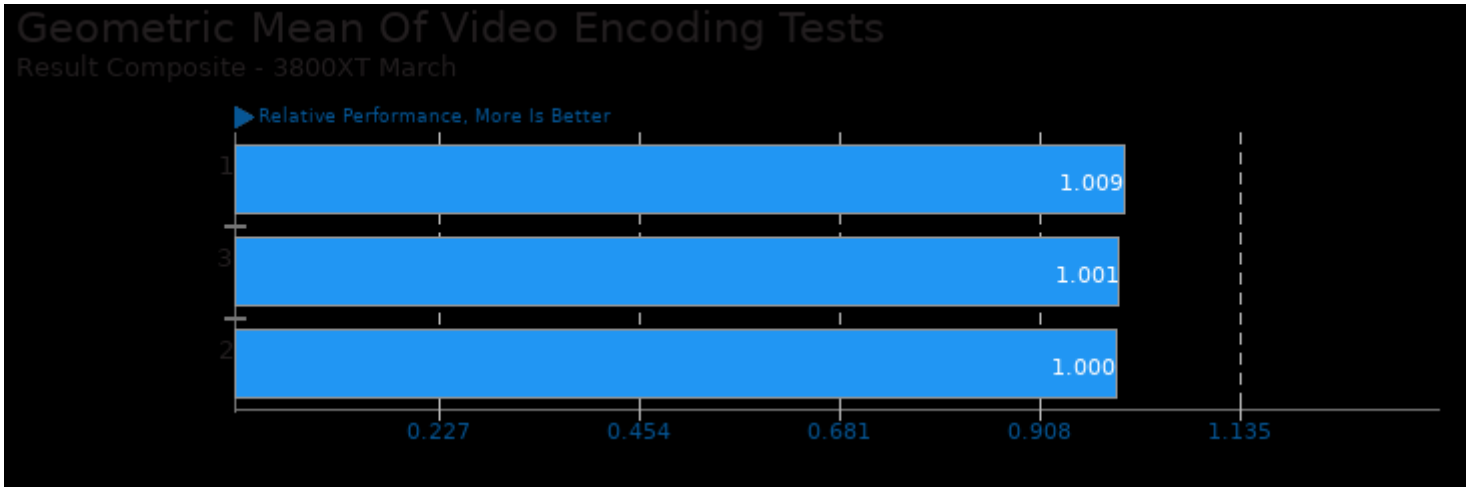


Geometric mean based upon tests: pts/dav1d and pts/avifenc

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Geometric mean based upon tests: pts/blender, pts/dav1d, pts/avifenc and pts/build-erlang



Geometric mean based upon tests: pts/dav1d and pts/avifenc

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 17:25.